Washington State Department of Health

Volume 1: Issue 12 September 10, 2003

West Nile Virus Newsletter

This is an electronic publication designed to keep you informed on issues of interest related to West Nile virus (WNV) in Washington, and provide current information to assist you in developing a response plan to WNV in your jurisdiction.

Surveillance News

The following table summarizes WNV surveillance by county through September 9, 2003. Additional surveillance activity not shown is the collection and speciation of approximately 900 mosquito samples from 27 counties.

WNV Surveillance - Testing Summary

	Horses		Birds		Sentinel Flocks		Mosquito Pools	
County	Tested	Positive	Tested	Positive	Tested	Positive	Tested	Positive
Adams	0	0	2	0	0	0	0	0
Asotin	1	0	0	0	0	0	0	0
Benton	1	0	19	0	395	0	191	0
Chelan	0	0	7	0	0	0	0	0
Clallam	1	0	4	0	0	0	0	0
Clark	2	0	5	0	0	0	11	0
Columbia	0	0	0	0	0	0	0	0
Cowlitz	0	0	7	0	0	0	26	0
Douglas	0	0	2	0	0	0	0	0
Ferry	0	0	0	0	0	0	0	0
Franklin	2	0	8	0	0	0	0	0
Garfield	0	0	0	0	0	0	0	0
Grant	0	0	4	0	0	0	0	0
Grays Harbor	0	0	4	0	0	0	0	0
Island	0	0	36	0	0	0	0	0
Jefferson	0	0	15	0	0	0	0	0
King	3	0	101	0	0	0	0	0
Kitsap	3	0	25	0	0	0	0	0
Kittitas	4	0	1	0	0	0	0	0
Klickitat	0	0	2	0	0	0	0	0
Lewis	1	0	20	0	0	0	0	0
Lincoln	0	0	1	0	0	0	0	0
Mason	0	0	17	0	0	0	0	0
Okanogan	1	0	2	0	0	0	0	0
Pacific	0	0	7	0	0	0	0	0
Pend Oreille	1	0	6	0	0	0	0	0
Pierce	5	0	90	0	0	0	0	0
San Juan	0	0	12	0	0	0	0	0
Skagit	1	0	29	0	0	0	0	0
Skamania	0	0	1	0	0	0	0	0

Snohomish	5	0	144	0	0	0	0	0
Spokane	7	0	15	0	0	0	0	0
Stevens	0	0	9	0	0	0	0	0
Thurston	1	0	47	0	0	0	0	0
Wahkiakum	0	0	1	0	0	0	0	0
Walla Walla	2	0	8	0	0	0	0	0
Whatcom	3	0	40	0	0	0	0	0
Whitman	3	0	11	0	0	0	0	0
Yakima	6	0	7	0	0	0	0	0
Totals	**53**	**0**	**709**	**0**	**395**	**0**	**228**	**0**

The Montana WNV Web site has up-to-date information on positive surveillance findings and cases. They have had 119 human cases from 26 counties, 128 horse cases, and 40 positive mosquito pools out of 427 tested through September 8, 2003. For further details you can access their site at: www.dphhs.state.mt.us/news/west_nile_virus/county_map_wnv_2003.htm

Local Health Focus – Lewis County Public Health

Submitted by Tony Barrett, Lewis County Public Health

The Lewis County Health Department developed a WNV response plan that was adopted by the Lewis County Board of Health in April 2003. The plan was prepared in cooperation with a WNV Work Group comprised of members from other county departments (Public Works, General Administration, Parks, and Animal Control), representatives from the State Department of Fish & Wildlife, local cities, and port districts. As part of the plan, the county also adopted Ecology's Best Management Practices for Mosquito Control.

Lewis County is a rural county with a lot of wetlands – both on private and public properties. The county has several large tire piles (more than 100,000 tires), including one that is the subject of current litigation. The lawsuit includes a complaint relating to mosquitoes and possible WNV.

Lewis County has applied for coverage under the NPDES permit to apply larvicides to selected county properties. However, it now appears that the county will probably not apply pesticides this year. One of the challenges in deciding whether or not to apply pesticides is that the response plan is predicated on finding WNV positive birds and horses before we had reported human cases. Obviously the mosquitoes, birds, and horses didn't read our plan.

Some of the key activities the county has carried out include:

- Environmental and nursing staff made presentations to elected officials and staff from county departments, and to numerous citizen groups, including senior centers, garden clubs, etc.
- Under Health Officer Dr. Diana Yu's leadership, meetings were held in early spring with local veterinarians and physicians.
- Health department staff developed Fact Sheets for county staff that might get questions about WNV, and prepared several news articles and interviews for local press.
- Larvae and adult mosquitoes were collected at selected sites. County owned properties were identified that needed ongoing surveillance and that might be candidates for application of larvicides. The county established a dedicated phone line for WNV calls and made arrangements for birds to be collected at outlying sites.

- County staff (nursing and environmental health) have participated in mosquito surveillance training provided by the state and by experts at Fort Lewis.

For more information, please contact Tony Barrett at (360) 740-1238 or by e-mail at TGBarret@co.lewis.wa.us.

Communicable Disease Epidemiology Update

Follow-up testing by the Department of Health Laboratories and the Centers for Disease Control and Prevention (CDC) revealed that a Yakima County man who had been hospitalized in August was not infected with WNV. As of September 9, 2003, there are no confirmed cases of WNV in Washington residents. The number of human cases of WNV infection across the country continues to rise sharply, and as of September 10, 2003 there have been more than 2,900 reported cases and 54 deaths. The vast majority of cases are in Colorado (>1000), Nebraska (> 500), South Dakota (>450), and Wyoming (>240). The median age of reported human WNV cases is 47 years, and the median age of the fatal cases is 79 years. There also have been 240 presumptive viremic blood donors identified across multiple states. Most of those individuals were asymptomatic infections; however, 21 had a reported febrile illness after donating blood. All screened blood that tests presumptively positive for WNV is embargoed to prevent the spread of disease.

Mosquito Focus – Culex territans

Culex territans is a species found in most Washington counties and reaches its' greatest numbers near clear, grassy ponds and bogs. Inseminated females hibernate in winter, emerge in early spring, obtain a blood meal, and lay the first egg rafts of the season. They rarely deposit egg rafts directly on the surface of the water. Eggs are normally laid on the bank where rainfall or rising water flushes them onto the water surface.

Culex territans larvae are found in a wide variety of clear water habitats that support emergent vegetation such as farm ponds, swamps, and roadside ditches. They are occasionally found in containers but cannot tolerate even moderate levels of pollution. *Culex territans* is one of a few species that can be found in the grassy margins of slow moving streams. Larvae may be found through September.

This species prefers to feed on frogs and other amphibians and reptiles and rarely feeds on warm-blooded animals.

Best Management Practices for Mosquito Control Revisited

At the request of several Mosquito Control Districts operating under their own mosquito control plans, the Department of Ecology (Ecology) will be revisiting the statewide Best Management Practices for Mosquito Control this fall in an effort to resolve differences between all the plans and fold them into one statewide document. Issues to be discussed include the use of methoprene in habitats where federal and state listed species are known to exist, monitoring

requirements, and record keeping. A two-day meeting is scheduled in Moses Lake October 14 and 15, 2003, and a follow-up meeting is scheduled in Olympia the later part of October, the date and place to be announced later.

Changes are also being considered in the way coverage is administered. Numerous requests have been made to Ecology to expand coverage options for licensed applicators, and best management protocols may be developed to address those applications.

Updates on meeting schedules and agendas will be forthcoming. Additional information is available from Kathleen Emmett, Ecology Water Quality Program, (360) 407-6478, or e-mail kemm461@ecy.wa.gov.

Clinical Trials – WNV Treatments

Clinical studies are starting this week on two experimental treatments for WNV infection. A study sponsored by the National Institute of Allergy and Infectious Diseases is enrolling patients infected with WNV to see if intravenous infusions of antibodies will prevent death or brain damage. In another study, scientists at AVI Biopharma of Portland, Oregon, will treat patients with a drug based on a technology called "antisense," which reproduces pieces of the DNA of the virus the drug is trying to attack. When given to a patient, the drug binds to the part of the DNA it mirrors, making it impossible for the WNV to replicate. For further information go to: www.usatoday.com/news/health/2003-09-08-west-nile_x.htm

Revision of Guidelines for Surveillance, Prevention, and Control of WNV Infection

The revised "Epidemic/Epizootic WNV in the United States: Guidelines for Surveillance, Prevention, and Control," is available from CDC at: http://www.cdc.gov/ncidod/dvbid/westnile/resources/wnv-guidelines-aug-2003.pdf

The revised guidelines were derived from discussions during the national meeting on WNV in New Orleans, Louisiana, February 9-11, 2003.

Article Submission

We are interested in receiving articles for future publications of the WNV newsletter. Please submit articles to Jack Lilja, jack.lilja@doh.wa.gov.

Community Comments

Let us hear your comments on this newsletter, your needs, or things you would like to see, by sending them to Maryanne Guichard, (360) 236-3391 or maryanne.guichard@doh.wa.gov.

WNV Web Resources

Washington State Department of Health www.doh.wa.gov/wnv
Center for Disease Control http://www.cdc.gov/ncidod/dvbid/westnile/
Washington State University Cooperative Extention http://wnv.wsu.edu/
Cornell University, Center for Environment http://www.cfe.cornell.edu/erap/WNV
Washington State Department of Agriculture
http://agr.wa.gov/FoodAnimal/AnimalHealth/Diseases/WestNileVirus/default.htm

DOH Contact List for West Nile Virus

General Public Toll-Free Hotline 1-866-78VIRUS

Publications: Brochures/Response Plan/Fact Sheets
Laura Harper, (360) 236-3380, or laura.harper@doh.wa.gov.

Surveillance: Mosquito
Jo Marie Brauner, (360) 236-3064, or jomarie.brauner@doh.wa.gov.

Surveillance: Dead bird surveillance and general WNV response
Tom Gibbs, (360) 236-3060, or tom.gibbs@doh.wa.gov.

Surveillance: Horses, case reporting, laboratory assistance
Dr. John Grendon, (360) 236-3362, or john.grendon@doh.wa.gov.

NPDES: Training, technical assistance
Ben Hamilton, (360) 236-3364, or benjamin.hamilton@doh.wa.gov.

WNV in Humans: Clinical information, case reporting, and laboratory testing
Call your local health jurisdiction or DOH Communicable Disease Epidemiology, (206) 361-2914 or (877) 539-4344.

Assistance with news releases and media response
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